REMARKS

In the last Office Action, the Examiner rejected claims 1-8 and 11 under 35 U.S.C. § 102(b) as being anticipated by Japanese Application Publication No. 06-289,955 (hereinafter, "Kiyokazu")[1]; rejected claim 9 under 35 U.S.C. §103(a) as being unpatentable over Kiyokazu in view of U.S. Patent No. 5,519,757 to Torin (hereinafter, "Torin"); and rejected claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Kiyokazu in view of U.S. Patent No. 5,689,821 to Shimazaki (hereinafter, "Shimazaki").

By this Amendment, Applicant amends claims 1, 3, 4, 6, 7, and 11 and cancels claims 8-10 without prejudice or disclaimer of the subject matter contained therein. Claims 1-7 and 11 are currently pending.

The Rejection of Claims 1-8 and 11 under 35 U.S.C. § 102(b) Should be Withdrawn

Applicant respectfully traverses the rejection of claims 1-8 and 11 under 35 U.S.C. § 102(b) as being anticipated by Kiyokazu. Anticipation under 35 U.S.C. § 102 requires that each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. If the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if that element is inherent in its disclosure. To establish inherency, the Office must show that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. (*See* M.P.E.P § 2131 (8th ed. 2001)).

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[1] For the Examiner's convenience, Applicant has attached a copy of an English language translation of Kiyokazu. Selected portions of the translation are discussed below.

Kiyokazu discloses a detachable/attachable information processor in which a detachment/attachment operation of a personal processor module (PPM) and a turn-on/shut-off operation of power of a docking station (DS) are associated with each other. *See* attached translation of Kiyokazu, at paragraph 0007. In Kiyokazu, when the PPM is connected to the DS in a power-off state of the DS, power is automatically supplied from the DS to the PPM. *See* attached translation of Kiyokazu, at paragraphs 0008 and 0012. However, Kiyokazu does not disclose, either expressly or inherently, that the power supply from the DS to the PPM is started while the power supply of the DS is in an off state. Therefore, Kiyokazu at least fails to teach the claimed combination including "a power supply control device configured to start the supply of power to the expansion unit when a command is given by the command device in a state where the electronic device is turned off, while keeping the power supply of the electronic device in an off state" (emphasis added), is recited in claim 1.

Claims 4 and 11, while of different scope than claim 1, each recite an electronic device, which "is turned off, while keeping the power supply of the electronic device in an off state." Claims 4 and 11 are therefore similar to claim 1 in this respect and are therefore allowable at least for reasons discussed above in regard to claim 1. Moreover, 2 and 3 are allowable at least due to their dependence from claim 1, and claims 5 and 6 are allowable at least due to their dependence from claim 4.

Accordingly, Applicant respectfully requests the Examiner to withdraw the rejection of claims 1, 4, and 11, as well as claims 2, 3, 5, and 6 based at least upon their respective dependency upon the allowable independent claims.

In addition, in Kiyokazu, there is no disclosure of the expansion unit automatically starting radio communication with another electronic device if an operating command from the electronic device while the electronic device is in an off state is not given within a predetermined period after starting power supply. Therefore, Kiyokazu does not disclose each and every element of claim 7 including at least "a control device configured to execute radio communication with another electronic device using the radio communication device when no operating command comes from the electronic device within a predetermined period after power from the electronic device has been detected by the detection device." Accordingly, Applicant respectfully requests the Examiner to withdraw the rejection of claim 7.

With regard to claim 8, Applicant has canceled this claim without prejudice or disclaimer of the subject matter contained therein. Applicant respectfully requests the Examiner to withdraw this rejection.

The Rejection of Claims 9 and 10 under 35 U.S.C. § 103(a) Should be Withdrawn

Applicant respectfully traverses the Examiner's rejection of claim 9 under 35 U.S.C. § 103 as being unpatentable over Kiyokazu in view of Torin, and the rejection of claim 10 under 35 U.S.C. § 103 as being unpatentable over Kiyokazu in view of Shimazai. In order to expedite prosecution of the present application, however, Applicant has canceled claims 9 and 10, thereby rendering the Examiner's rejections moot. Accordingly, Applicant respectfully requests the rejections of claims 9 and 10 be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Attachments: Machine translation of Japanese Application Publication No. 06-289955.

CLAIMS

[Claim(s)]
[Claim 1] The memory / bus control circuit which enables transfer of the information between the devices on CPU, memory, the local bus that connects various devices, and Above CPU, the above-mentioned memory and the above-mentioned local bus, The personal processor module constituted from a connection external information machines and equipment and whose information interchange are enabled using the above-mentioned local bus (it is hereafter written as PPM), Above PPM and connection are possible. The connection of the above-mentioned local bus, and the device of the number of the arbitration on the above-mentioned local bus, In the condition of having consisted of docking stations (it being hereafter written as DS) constituted from a power circuit which supplies a power source, and having connected Above PPM and DS In the attachment-and-detachment mold information processor which whose Above CPU is accessible to the device on the local bus of DS, and can carry out the electric power supply of the above-mentioned power circuit not only to the device of DS but to PPM The relay circuit which controls the power supplied to the device and PPM of DS, and the wearing actuation detector which detects that wearing actuation of PPM was carried out, The attachment-and-detachment mold information processor characterized by the above-mentioned relay circuit starting an electric power supply if the power control circuit which sends a control signal to the above-mentioned relay circuit is established in DS and it is equipped with PPM.
[Claim 2] The attachment-and-detachment mold information processor with which the above-mentioned relay circuit will be characterized by to stop an electric power supply and to eject PPM if DS **** and an eject button are pushed in the ejection device in_which the eject button a user can instruct ejection of PPM to be, the ejection detector which detects that the above-mentioned eject button was pushed and sends a control signal to the above-mentioned relay-control circuit, and the above-mentioned relay circuit detect having stopped the electric power supply, and ejects PPM in an attachment-and-detachment mold information processor according to claim 1.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] This invention relates to what offers a means to improve the user-friendliness at the time of the attachment and detachment, and operability in the field of an information processor like a workstation and a personal computer with respect to the **** attachment-and-detachment mold information processor which removes and carries a specific component and can do it.

[0002]
[Description of the Prior Art] The use gestalt is being diversified with the spread of current and personal computers. As one of them, one person is being in the inclination using two or more personal computers. The businessman using 3 models of the low-price personal computer used as a concrete example at the desktop PC used in office, the notebook sized personal computer carried at the time of a business trip, and a house is mentioned.
[0003] In order to meet such a demand, the attachment-and-detachment mold personal computer appeared. The view is being able to remove and use only an element required at the time of carrying from the desktop PC currently used in office. The basic configuration is a notebook sized personal computer and a docking station (it is hereafter written as DS.), and if a notebook sized personal computer is connected, it can be used as a desktop PC. As such a conventional technique, there are "the electronic information machines and equipment and its docking station" which are shown in JP,4-263304,A.
[0004]
[Problem(s) to be Solved by the Invention] Although a notebook sized personal computer is set as the object of carrying with the conventional technique expressed above, in this invention, portable improvement is aimed at and the system which can detach and attach from a body one component which consists of CPU, memory, and HDD is assumed from a desktop PC. Here, the above-mentioned component defines bodies other than a personal processor module (it is hereafter written as PPM), and PPM as a docking station (it outlines Following DS). PPM and DS are the same images as the cassette tape of a video system, and the relation of a videocassette recorder. Although PPM and no DSs function separately, they function as equipping DS with PPM as an usable personal computer.
[0005] It is related with the attachment-and-detachment mold information processor which consists of such PPM and DS, and they are the following technical-problem ****.
[0006] It differs in FD etc. and attachment and detachment of PPM cannot be performed in the condition of having gone the power source into equipment. For this reason, there is troublesomeness of the operability of being on a check about the power source being off, and taking out PPM conversely which switches on a power source for PPM being contained by Kami of a check. Therefore, the improvement in operability of attachment-and-detachment actuation of PPM and power off/close operability is the technical problem of this invention.
[0007]
[Means for Solving the Problem] In order to solve the above-mentioned technical problem, the relay circuit which controls the power which a power circuit supplies to a system circuit, the wearing actuation detector which detects that wearing actuation of PPM was carried out, and the power control circuit which sends a control signal to the above-mentioned relay circuit are established in DS. Moreover, the ejection device which detects that the electric power supply to the ejection detector which detects ** as the eject button was pushed, and a system circuit stopped, and ejects PPM is prepared in DS.
[0008]
[Function] The above-mentioned technical problem is solved in the following operations.

Since the wearing actuation detector has received the direct electric power supply from the power circuit, it detects wearing of PPM also in the condition that power is not supplied to a system circuit. Detection of wearing sends a signal to a power control circuit. If a power control circuit receives this signal, a relay circuit will be controlled, an electric power supply will be started to a system circuit, and CPU actuation will be started like the usual personal computer. Thus, if it equips with PPM, power will be supplied automatically and a system will start. Moreover, if it detects that the eject button was pushed, an ejection detector will send a signal to a power control circuit. The power control circuit which received the signal controls a relay circuit to stop the electric power supply to a system circuit. The ejection device is always supervising the power-source condition of a system circuit, and if it recognizes that the power source stopped, it will eject PPM. Thus, ejection actuation is interlocked with and the power source of a system circuit falls automatically. As mentioned above, the operability of attachment-and-detachment actuation of PPM and power off/close operability improves.

[0009]

[Example] Below, the example of this invention is explained. First, the product image of the attachment-and-detachment mold information processor constituted from PPM and a DS is explained using drawing 1 and drawing 2 . An appearance when drawing 1 removes PPM, and drawing 2 are the appearances when equipping DS with PPM. In these drawings, the same sign is given to the same component. For PPM and 2, as for PPM insertion opening of DS2, and 4, DS and 3 are [one / an indicating equipment and 5] keyboards among drawing. When using an attachment-and-detachment mold information processor, PPM1 is inserted in DS2 as shown in drawing 2 . On the other hand, when carrying PPM, as shown in drawing 1 , it is removed from DS2. A user should carry only removed PPM1. For example, what is necessary is just to purchase one set and DS2 for PPM1, when using it at both a station and a home. Compared with the note type information processor, for the configuration which contains neither an indicating equipment 4 nor a keyboard 5, PPM1 is a small light weight and is excellent in portability. Next, the internal configuration of PPM1 and DS2 is explained.

[0010] Drawing 3 shows the block diagram of an attachment-and-detachment mold information processor. In this drawing, the same sign is given to the circuit block of the same function as drawing 1 . PPM1 consists of a system circuit 10 of the electronic-circuitry section, and DS2 and the connection 11 between which it mediates. As for a hard disk drive (it is hereafter written as HDD) control circuit, and 17, the nonvolatile RAM by which the information in which as for 12 CPU and 13 wrote memory / bus control circuit, and 14 even if, as for random access memory (it is hereafter written as RAM) and 15, the read only memory (it outlines Following ROM) fell and, as for 19, the power source fell is not lost in a system circuit 10, and 16 are [HDD and 18] local buses. 24 is a current supply line to a system circuit 10. DS2 is constituted in the power control circuit 23 which controls the electric power supply to the 20 PPM system circuit 1 of the electronic-circuitry section, the connection 21 between which it mediates and the power circuit 22 changed into DC (direct current) from AC (alternating current), a system circuit 20, etc. The power control circuit 23 recognizes whether PPM1 is connected by the connection information signal line 25 while supplying power also to a system circuit 10 through connections 21 and 11. Moreover, transfer of through various information can do the local bus 18 to which system circuits 10 and 20 were connected

by connections 11 and 21. Thus, PPM1 and DS2 become removable considering connections 11 and 21 as a contact.

[0011] Here, the detailed configuration of the system circuit 20 in DS2 is explained. As a device linked to a local bus 18, the LAN circuit for network connections in 30, the DSP circuit where 31 carries out digital processing of the signals, such as voice and an image, the SCSI control circuit where the display-control circuits 32 and 33 which display the information which needs 32 for a display 4 control receipts and payments for information at file equipment etc., and HDD and CDROM36 by which the SCSI circuit 33 controls 34 and 35 are I/O-hardware-control circuits which carry out mediation of a local bus 18 and I/O bus 37. As a device linked to I/O bus 37, the expansion slot which 37-38 can equip with various I/O cards, the keyboard control circuit where 41 controls a keyboard 5, FDC by which 42 controls a floppy disk, the nonvolatile RAM in which 43 stores various system information, and 44 are printer control circuits which control a printer. Connections 11 and 22 are accessed to all the devices in these system circuits 20 in connection, now the condition of being by CPU12 in PPM1. Actuation of the whole system in this case is explained below.

[0012] If a power circuit 22 starts current supply, the power control circuit 23 will check whether PPM1 is connected through the connection information signal line 25. If it connects, an electric power supply will be started through the electric power supply line 24 to the system circuit 20 of DS2, and the system circuit 10 of PPM1. Supply of power is received and CPU12 carries out initiation of operation. First, pro FURAMU stored in ROM15 is performed. This program checks that actuation while setting up information required for initialization of each device in a system circuit 10 and a system circuit 20. If there is no problem in each device, in order to download the system program stored in HDD17 to RAM14, CPU12 reads to the HDD control circuit 16, and a command is sent. If download is completed, CPU12 will perform the system program. Generally this system program is called the operating system (it is hereafter written as OS), and has MS-DOS and UNIX as a concrete product. Although actuation of fundamental OS is the same, the operating environment changes with classes of I/O to be used. In order to absorb a difference of operating environment, the device driver and called program corresponding to each I/O are downloaded from HDD17 to RAM14. If a setup of a device driver is completed and OS starts completely, a user will perform various application software according to an application. For example, considering a word processor, the outline of operation is as follows as application software. If the program is stored in HDD17, it will direct to read the program to which OS corresponds to the device driver of the HDD control circuit 16. Thereby, a device driver transmits a command to the HDD control circuit 16, and transmits the program to RAM14 from delivery and HDD17. If a transfer is completed and this program is performed, a word processor will start. After starting, in order to read the text file stored in HDD34 or CDROM35, the information on a text file is transmitted to RAM14 from HDD34 or CDROM35 by taking out directions to the device driver of the SCSI circuit 33. In order to display this information, the device driver of the display-control circuit 32 is used, and required information is transmitted to the display-control circuit 32 from RAM14. The display-control circuit 32 is changed into the visible information which can display this information, and is sent to a display 4. When editing the displayed document, the keyboard control circuit 41 incorporates the edit information inputted by the keyboard 5,

and is transmitted in RAM14 using the device driver. According to this edit information, the text file already stored in RAM14 is edited, the information after edit is again sent to the display-control circuit 32, and the document after edit is displayed on a display 4. Thus, the device driver corresponding to I/each O is used, and various work is performed. When transmitting a text file to other information machines and equipment connected in the network, since a document is saved in the printer control circuit 44 and a floppy disk in order to print the SCSI circuit 33 and a document to save the DSP circuit 31 and a text file at HDD34, the device driver of FDC42 is used for the voice output of the LAN circuit 30 and document information.

[0013] As explained above, the attachment-and-detachment mold information processor of this invention is that DS2 is equipped with PPM1, and becomes one perfect system configuration. Fundamentally, taking out PPM1 from DS2 in the condition that the power source is supplied to system circuits 10 and 11, and equipping DS2 with PPM1 lead to failure of the various devices connected to the local bus 18, or informational loss. Thus, the operability of attachment and detachment worsens. The power control circuit 23 was formed as a means to improve this operability. This actuation is the point of this invention and explains that detail below.

[0014] Drawing 4 is the block diagram of the attachment-and-detachment mold information processor which showed the internal configuration of the power control circuit 23 to the detail. In this drawing, the same sign is given to the circuit block and the same signal line which have the same function as drawing 3 . The wearing actuation detector where 50 detects that PPM1 was connected in the power control circuit 23, the detection signal line in which it is shown that, as for 51, wearing actuation was detected, the relay circuit where 54 supplies power to the electric power supply line 24, the power control signal line with which 53 controls a relay circuit 54, the relay circuit which 52 inputs the information on a detecting signal 51, and outputs a controllable signal for the relay control circuit 52, and 55 are resistance 55. The wearing actuation detector 50 outputs "L" level to the connection information signal line 25. The connection information signal line 25 is connected to PPM1 through connections 11 and 21, and is returned to the wearing actuation detector 50 as it is. Therefore, connections 11 and 12 input the "L" level as an output level with the same wearing actuation detector 50 in a connection ******** condition. Thereby, it is recognized that DS2 is equipped with PPM1. On the other hand, in the condition that connections 11 and 12 are not connected, although the input level of the connection information signal line 25 to the wearing actuation detector 50 will be in floating, resistance 55 pulls up the signal level on power-source level ("H" level). Consequently, the connection information signal line 25 of the wearing actuation detector 50 becomes the input of "H" level. Thereby, it is recognized that DS2 is not equipped with PPM1. As mentioned above, it is detectable that DS2 was equipped with PPM1 because the input signal of the connection information signal line 25 changes from "H" to "L" level. Although the wearing actuation detector 50 is setting signal level of the detection signal line 51 to "L", if wearing actuation is detected, it will usually set signal level to "H." When the input level of the relay control circuit 52 which inputs the detection signal line 51 is "L", the signal of "L" level is outputted to the power control signal line 53, and the relay circuit 54 has stopped the electric power supply to the electric power supply line 24. In this condition, if input REBERERU of the detection signal line 51 changes to "H", the power control signal line 53 will output the signal of

"H" level to a relay circuit 54. Thereby, a relay circuit 54 starts an electric power supply to the electric power supply line 24. Thus, if DS2 is equipped with PPM1, an electric power supply will be started automatically 10 of the system circuit 20 of DS2, and PPM1. As it mentioned above henceforth, CPU12 starts predetermined actuation and, finally a user can use the application software of requests, such as a word processor.

[0015] Next, the actuation in the case of taking out PPM1 from DS2 is explained using drawing 5 . Drawing 5 is the block diagram showing the example of the attachment-and-detachment mold information processor which aimed at improvement in operability in the case of removing PPM1. In this drawing, the same sign is given to the circuit block and the same signal line which have the same function as drawing 4 . When the ejection signal line with which the eject button to which a user does the direct control of 60 among drawing, and 61 spread a pulse signal when an eject button 60 is pushed, the ejection detector where 62 changes a pulse signal into a level signal, and 63 usually detect a pulse signal on "L" level, the detection signal line used as "H" level and 64 are ejection devices which take out PPM1 from DS2 mechanically. In the condition of using application software, such as a word processor, the relay circuit 54 supplies power to system circuits 10 and 20 through the electric power supply line 24. The detection signal line 63 and the power control signal line 53 are "H" level. An activity with a word processor is ended, and in order to take out PPM1, an eject button 60 is pushed. At this time, the ejection signal line 61 sends a pulse signal to the ejection detector 62. Thereby, the ejection detector 62 sets signal level of the detection signal line 63 and the ejection device 64 to "L." The relay control circuit 52 will set signal level of the power control signal line 53 to "L", if the signal level of the detection signal line 63 changes from "H" to "L." A relay circuit 54 stops the electric power supply to the electric power supply line 24. Since the detection signal line 63 is "L" level, the ejection device 64 recognizes that the eject button 60 was pushed, and if it detects further that the signal level of the electric power supply line 24 fell, it will perform ejection actuation of PPM1. Thus, if an eject button 60 is pushed, PPM1 can be taken out by Kami who suspended the current supply of system circuits 10 and 20 automatically. In addition to improvement in operability, this has the effectiveness of power-saving. It is because the current supply to the unnecessary electric power supply line 24 surely stops in the condition of having removed PPM1.

[0016] Since desorption actuation of PPM1 and the current supply initiation actuation to system circuits 10 and 11 interlock as stated above, improvement in the actuation concerning the desorption of PPM1 which is a technical problem is realizable.

[0017]

[Effect of the Invention] Since attachment-and-detachment actuation of PPM, and powering on/running open of equipment interlock according to this invention as explained above, the troublesomeness of the operability of being on a check about the power source being off, and taking out PPM conversely which switches on a power source for PPM being contained by Kami of a check is lost.